

Okinawa as Transported Landscape: Understanding Japanese Archaeological Remains on Tinian Using Ryūkyū Ethnohistory and Ethnography



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INTRODUCTION

ARCHAEOLOGISTS OFTEN LINK THE TWO WESTERN PACIFIC ISLANDS OF OKINAWA AND TINIAN to a common ethnic heritage dating to the early twentieth century. Okinawan culture serves as a template for interpreting rural archaeological remains of the Japanese sugarcane plantation era in Tinian (Fig. 1). Tens of thousands of Okinawans immigrated to Tinian and other Commonwealth of the Northern Mariana Islands (CNMI) to be tenant farmers or contract laborers on the plantations between the 1920s and 1944.¹ The extent to which these archaeological remains on Tinian reflect a “transported landscape” from Okinawa rather than a Japanese colonial construct is explored here using the vehicles of Okinawan ethnohistory and ethnography.

Anderson’s (1952) ethnobotanical concept of transported landscapes has generally been applied by archaeologists in the Pacific to the human transformation of island ecosystems well before the European colonial era, beginning with the first wave of Lapita immigrants from Island Southeast Asia into Near Oceania c. 1200 B.C. and culminating with the Polynesian settling of Remote Oceania after 1200 A.D. (Kirch 2000). These models “refer to the fact that when people move into a new area, they carry with them not just physical artifacts, but typically a host of plants and animals, including crops, weeds, and vermin” (Kirch 2009: 415). This study proposes to take the concept one step further, exploring the extent to which Okinawans who immigrated to Tinian and Northern Mariana plantations in the early twentieth century brought with them not only the artifacts and plants or animals provided by their Japanese employers, but also traditional knowledge and spiritual beliefs developed in their Ryūkyū landscape over many centuries before the Meiji- and Showa-era labor diaspora began (Adachi 2006).

One twist to this particular example of colonialism in the Northern Mariana Islands is that, unlike the profound impacts sustained by many native cultures from prolonged interactions with European and American powers (Flexner 2014), Tinian was relatively untouched before the Japanese arrived. This is because it had already

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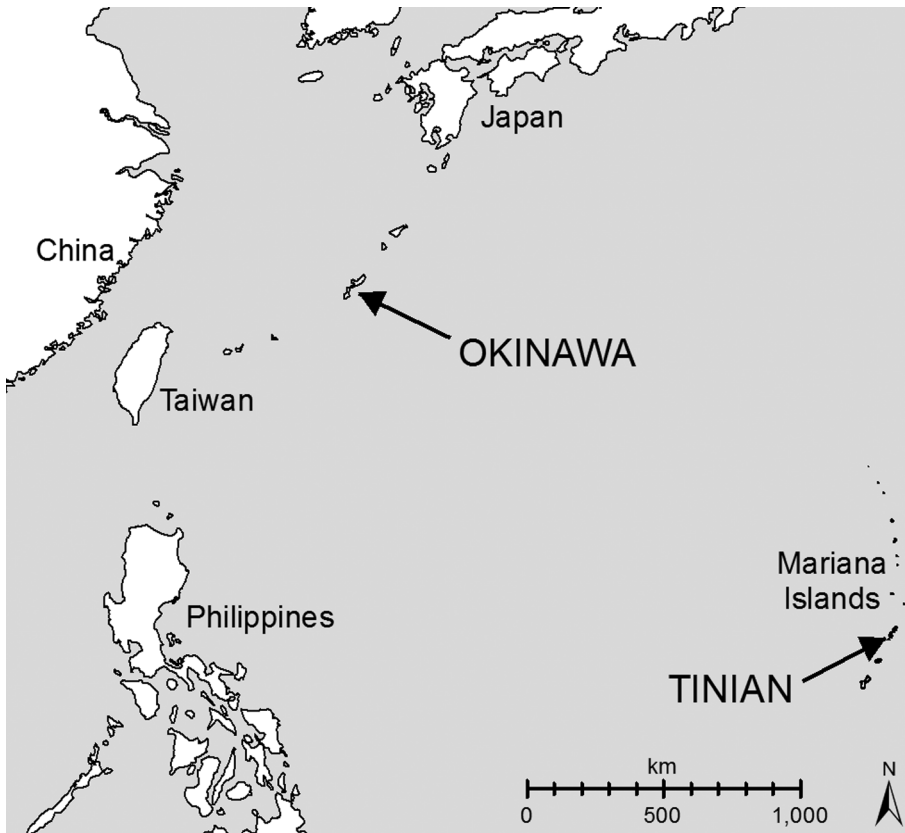


Fig. 1. Tinian and Okinawa in the western Pacific. Source: map prepared by Mike T. Carson in 2014.

been largely abandoned by its former Chamorro inhabitants; it was used by only a few visiting ranchers to harvest wild cattle before and during the early twentieth-century German administration of the islands (Fritz 1989). Japanese government and corporations did have a substantial impact on Chamorro and Carolinian inhabitants residing on nearby Saipan, Rota, and more northern islands such as Pagan before World War II and during the war on Guam (Higuchi 2009), but Tinian was virtually a blank slate.

Notwithstanding the horrendous destruction of World War II, structural and functional parallels indeed exist between the architectural remains of many farmsteads of the Japanese plantation era on Tinian and those in rural Okinawa. However, the material record alone is sometimes insufficient to capture subtleties of traditional Ryūkyū land use and any cultural significance that may or may not have existed in the archaeological landscape of Tinian. Since primary accounts of the Japanese development period on Tinian are mostly accessible in the English language through translations in technical literature (Higuchi 1998, 2001, 2008), the comparative framework provided by Okinawan ethnohistory and ethnography is employed here. This broader perspective is critical for assessing the degree to which Okinawa and its culture can be used as a transported landscape for interpreting the archaeological data of Tinian.

ETHNOHISTORIC AND ETHNOGRAPHIC LITERATURE

Many ethnohistories and ethnographies have been compiled concerning the cultural areas of Okinawa and the Mariana Islands. A rich corpus of pre- and post-World War II knowledge and observations from both islands is in English, although much more information may remain in Japanese or Spanish primary records. Hans Hornbostel's (1924–1925) and Laura Thompson's (1932, 1940) pre-War World II studies of Chamorro culture and prehistory for the Bishop Museum are still the backbone of archaeological inquiry on Tinian and in the Mariana Islands today. Scott Russell's (1998) review of prehistory in the CNMI, a prewar ethnohistory of the CNMI by Georg Fritz (1989), and postwar ethnographies by Neal Bowers (1950) and Alexander Spoehr (1957) are indispensable companion volumes.

Prewar literature on Okinawa has not been systematically translated from the Japanese; however English-language literature includes a postwar ethnography of village life compiled by Clarence Glacken (1955), an ethnohistory of Okinawa by George Kerr (1958), a compilation of papers on Okinawan culture and society edited by Allan Smith (1964), a study of agricultural land use by Shannon McCune (1975), an examination of traditional priestesses and their role on Henza island by Susan Sered (1999), a look at ritual and society in the southern Ryūkyū Islands by Arne Rokkum (2006), a study of the Eisa dance tradition in modern Okinawa by Christopher Nelson (2006), and an updated review of Ryūkyū prehistory by Richard Pearson (2013).

Selected writings of early nineteenth-century explorers such as English sailor Basil Hall (1818) and French Jesuit clergyman Theodore Forcade (Bollinger 1991) in Okinawa, along with early explorers such as French captain Louis Claude de Freycinet (2003) and Belgian Jesuit clergyman Peter Coomans (1997) in the Mariana Islands, are directly relevant to understanding traditional history and archaeology in both regions before the later Okinawan diaspora to the Northern Mariana Islands.

To provide a broader context for comparing the archaeological record of both islands, a brief history of each is presented citing published references.² Emphasis will be placed on the early twentieth century era.

Brief History of Tinian

The main Mariana Islands of Guam, Tinian, and Saipan were initially settled by at least 1500 B.C. (Fig. 2). Maritime-adapted people are hypothesized to have sailed to the Mariana Islands by way of Palau and Yap from Island Southeast Asia (Vilar 2013), possibly after settling the northern Philippines (Carson 2013; Carson and Kurashina 2012; Carson et al. 2013; Hung et al. 2011). Pre-Latte period (1500 B.C.–A.D. 800) archaeological contexts on Tinian have yielded Marianas Red ceramics with occasional lime-filled incisions (Craib 1993; Hunter-Anderson and Butler 1995; Russell 1998; Spoehr 1957). Postholes and hearths with habitation debris indicate cooking, food storage, and tool manufacturing (Carson 2014).

Latte period (A.D. 800–1668) villages with stone structure supports called latte sets found on Tinian demonstrate a preference for the same pre-Latte coastal locations (i.e., those with access to fresh water seeps at low tide and marine resources) favored by their ancestors (Amesbury 1999; Dixon et al. 2006; Dixon et al. 2011; Thompson 1940). The presence of *lusong* (boulder mortars) near many latte sets suggests an increase in the consumption of rice (Butler 1990), while rock-filled ovens are assumed to have been used to bake taro or yams and breadfruit (Bulgrin 2006). During the

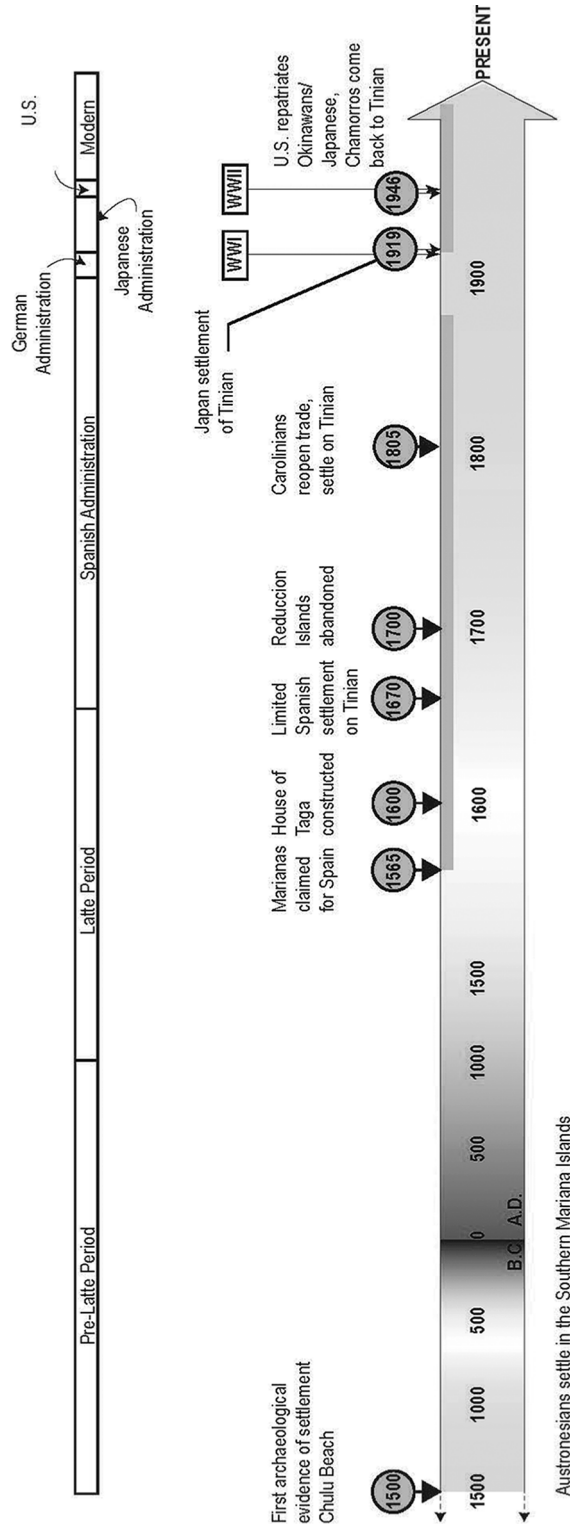


Fig. 2. Major historic events for Tinian.

interval between Magellan's landing in 1521 and Spanish colonial settlement of Guam in 1668, Chamorro inhabitants supplied passing vessels in the Manila Galleon trade with badly needed food in exchange for bits of iron (Barratt 2003; Driver 1983; Quimby 2011).

The Spanish administration (1668–1898) of Tinian was sporadic and rarely involved more than a Jesuit padre with a few Philippine helpers and native converts (Coomans 1997; Driver 1983, 1993). By 1720, virtually all Chamorros from the northern islands (except Rota) had been taken to Guam by the Spanish, where they either died of disease or were assimilated into the Guamanian community (Hezel 1989). In 1853, the colonial government decided to use Tinian to isolate leprosy victims from the rest of the population; the leprosy colony was supported by the sale of beef and hides transported by Carolinian settlers (Bowers 1950). Spain sold off all its colonies in Micronesia except Guam at the conclusion of the Spanish-American War in 1899.

German administration (1898–1914) of Tinian was even more tenuous than Spain's had been. Germany's primary interest in the Northern Mariana Islands was the development of an export economy based on copra production (Fritz 1989). German authority over the islands ended during World War I, when a Japanese naval squadron seized control of Saipan along with other German possessions in Micronesia in 1914 (Russell 1999).

Japanese administration (1914–1944) of Tinian began when the Supreme Council of the League of Nations awarded the mandate over German Micronesia to Japan in May 1919, at the close of the war. After a few unsuccessful experiments in export farming, Nan'yō Kōhatsu Kaisha (South Seas Development Company, henceforth NKK) obtained a lease for the entire island of Tinian in 1926 (Russell 1995). The company imported laborers, cleared land for sugarcane plantations, organized factories, constructed Shinto shrines, and built railroads to the first sugar mill on Tinian by 1930 (Welch and Bodner in press). The island was divided into rectangular plots of 14.7 acres (6 ha) that were leased by tenant farmers (Higuchi 1998; Tuggle in press), most of whom paid rent in sugarcane. Along the west coast, at the location of a protected harbor, NKK established a company town, modeled on a company town founded in 1917 on Minami Daitō, a small Japanese island east of Okinawa (Ono et al. 2002). By 1933, the former San Halon village, now called Tinian-machi (Tinian Town) by the Japanese or Songsong by the Chamorro, boasted a sugarcane mill, a warehouse, railway sheds, administrative offices, a fish market, an ice storage building, a clubhouse, a dispensary, a canteen, and about 70 company houses (Moore et al. 1998; Peattie 1988).

In 1944, Tinian had a civilian population of 17,900, only 26 of whom were Chamorro; the majority of the population was Japanese, Okinawan, or Korean (Bowers 1950). In anticipation of World War II, some civilians were repatriated to their homeland, but plantation laborers from Korea and Okinawa were forced to work on military construction projects day and night (Denfeld 1997, 2002). Systematic air and naval bombardment by the United States began in June of 1944. The American invasion took place on 24 July, and Tinian was declared secured by the Americans on 1 August 1944. Most of Tinian Town and many rural homesteads of the plantation era were destroyed during combat, but the ruins of concrete water cisterns and pigpen walls still remain, marking the former farms of a generation of Okinawan families (Dixon 2004).

American administration (1944–present) of Tinian began with the transformation of the island into the largest U.S. air base in the Pacific at the time (Russell 1995). North Field, (formerly Ushi Field) was eventually used for loading atomic bombs dropped in Hiroshima on 6 August and in Nagasaki three days later, which brought about the end of the war on 10 August 1945. In 1977, Tinian became a part of the Commonwealth of the Northern Mariana Islands (Farrell 2012) where ranching, subsistence agriculture, and fishing replaced sugarcane production as the main economic activity of over 3000 inhabitants today.

Brief History of Okinawa

The cultural chronology of Okinawa is far older and more complex than that of Tinian, but much less so than that of mainland Japan, with an extended prehistoric and shorter historic period (Fig. 3). The Ryūkyū archipelago has been occupied since the late Pleistocene, when it may have been periodically occupied by early mobile hunter-gatherer groups who used primitive watercraft to cross deep water gaps between the islands. Palaeolithic period (32,000–10,000 B.P.) remains are found in rock shelters and caves within limestone karst terrain with bones of deer and boar dating perhaps as far back as 32,000 years B.P. (Takamiya 1996, 2003, 2009). No fossilized human remains have been recorded with tools from uncontested Palaeolithic contexts in Okinawa, however (Nakagawa et al. 2010; Pearson 2013).

Shellmound period (7000–1100 B.P.) prehistory of the Ryūkyū Islands begins after a gap of some 3000 years (no late Pleistocene sites have been recorded). This period of prehistory differs in many respects from the Japanese sequence. Following relative stabilization of the shoreline by fringing coral reefs and lagoons around 2000 B.C., shell mounds formed from the detritus of the manufacture of shell ornaments traded to southern Japan; these may have formed as early as the first century A.D. (Kinoshita 2009). Small settlements of pit houses, burials, and other domestic features typify the later archaeological remains of this period, when immigrants to Okinawa from southern Kyushu were involved in the marine shell ornament trade to China and Korea (Pearson 1972, 2013).

Gusuku period (A.D. 1100–1429) “castle” type sites are found on commanding hilltops occupied by Gusuku period rulers and their retainers from about A.D. 1200 (Uezato 2009); they were supported by large villages and agricultural fields below (Allen 2003; Ladefoged and Pearson 2000).³ Okinawans became noted sailors and navigators in a vibrant trading network from Viet Nam and China to Japan and Korea (Takamiya 1996), when tribute was paid to Chinese rulers by the royal family of the first Sho dynasty that unified the islands (Kamei 2009).

Kingdom period (1429–1879) rule over the Ryūkyū archipelago by the second Sho dynasty started in 1469, but was interrupted in 1609 when samurai warriors from the Shimazu clan were sent by the southern Japanese *daimyo* (lord) of Satsuma to invade Okinawa; they captured King Sho Nei from his castle at Shuri (Turnbull 2009). The Ryūkyū Kingdom then became a vassal state of the Shimazu clan. The Tokugawa *shogun* (military commander) permitted Ryūkyū to trade with China as a means of obtaining goods from the rest of the world, but aggressively discouraged other foreign visitors to Ryūkyū (Bollinger 1991; Kerr 1958; McCune 1975). With the king's abdication, the kingdom ended in 1867 and the islands became a Japanese prefecture. Former court nobility in Okinawa were forced to become commercial and

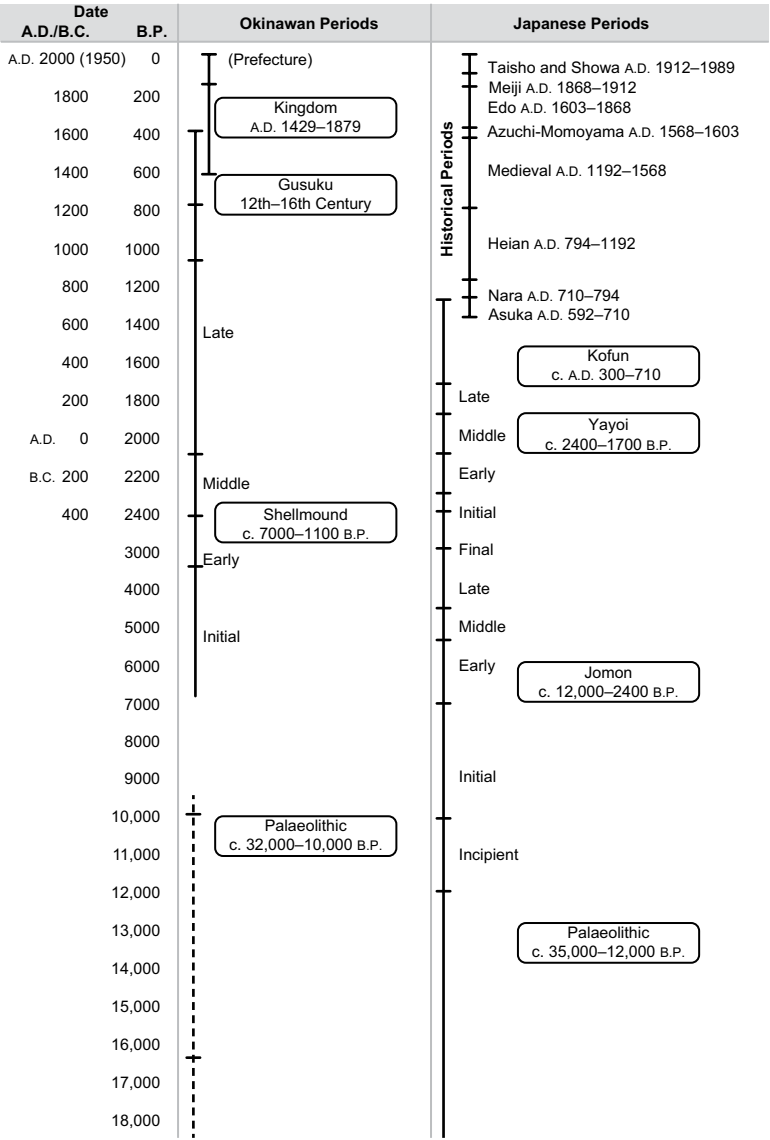


Fig. 3. Okinawan chronological sequence.

government administrators or oversee agricultural production in formerly under-utilized inland districts.

Japanese Prefecture (1879–present): Okinawa became a prefecture of Japan in 1879. It was ruled from Tokyo via Shuri castle in Naha from the end of the nineteenth to the beginning of the twentieth century. Japanese governance involved the administration of numerous villages (*aza*) and smaller *yādui* (hamlets). During this period, former nobility and their retainers put many hillsides and streams into full-time agricultural productivity, growing rice and sugarcane to pay taxes and sweet potatoes and other crops for local consumption.

The Japanese prefecture of Okinawa was peripheral to Japan's role in World War I. However, increased local populations led to tens of thousands of Okinawan rural farmers and urban laborers emigrating to work on the sugarcane plantations in the Northern Mariana Islands during the decades leading up to World War II (Dixon 2004). In early 1945, the Japanese military conscripted labor to construct several runways with taxiways and aprons in Okinawa. These were then targeted by American bombardment after Operation Iceberg began on 26 March 1945 (Haskew 2014). Japanese resistance was fierce and not declared over until June of 1945, followed by the unconditional surrender of Japanese forces in the Ryūkyū Islands on 7 September 1945 (Ota 1981; Rottman 2002).

After the war's end, the United States retained authority over the islands through the Okinawa Advisory Council, and was granted continued authority in 1952 under the San Francisco Peace Treaty between Japan and the Allied Powers. The Okinawa Advisory Council governed the Ryūkyū Islands until they were returned to Japanese sovereignty in 1972, although a proviso of the Treaty of Mutual Cooperation and Security continues to permit an extended U.S. military presence in Okinawa.

OKINAWA AS TRANSPORTED LANDSCAPE

Since primary accounts of the Japanese development period on Tinian are largely untranslated except in technical literature, a comparative framework provided by nineteenth- to twentieth-century ethnohistory and ethnography is required to assess the degree to which Okinawa can be envisioned as a transported landscape for interpreting archaeological data from Tinian. Although they are by no means the only avenues for fruitful comparison, several aspects of traditional Okinawan material culture and land use are discussed below: domestic architecture, farming methods, animal husbandry, water conservation, mortuary customs, and ritual locations. All were chosen because of their obvious expression in both Tinian and Okinawan archaeological landscapes today.

It is often challenging to tease out of the archaeological data on Tinian a traditionally Okinawan footprint from that which was superimposed on the island by the NKK sugarcane plantation. Recent research into the nature of the Tinian plantation by archaeologist David Tuggle (in press) with the aid of Japanese historian Wakako Higuchi (1998, 2001, 2008) suggests that the relict settlement pattern reflects little evidence of organically derived ethnic enclaves. Instead, NKK apparently assigned families from Okinawa and other regions of Japan to farmland divided up on a rectilinear grid. NKK focused on prime soil productivity in the early 1920s. Then, as local supply met mainland demand for sugar and its by-products in the late 1930s, NKK expanded the plantation by bringing in new families or individual laborers to farm less-productive land. Railroad spurs were added to new fields and farmsteads as needed to link with the road network to the sugar refinery. Tinian's population was later re-directed toward Japanese military airfield and defense construction as the war effort replaced sugarcane production (Fig. 4).

Domestic Architecture

One of the basic tenets of the archaeological literature on prewar Tinian is that the concrete or low-pillared houses routinely recorded in the jungles were constructed on

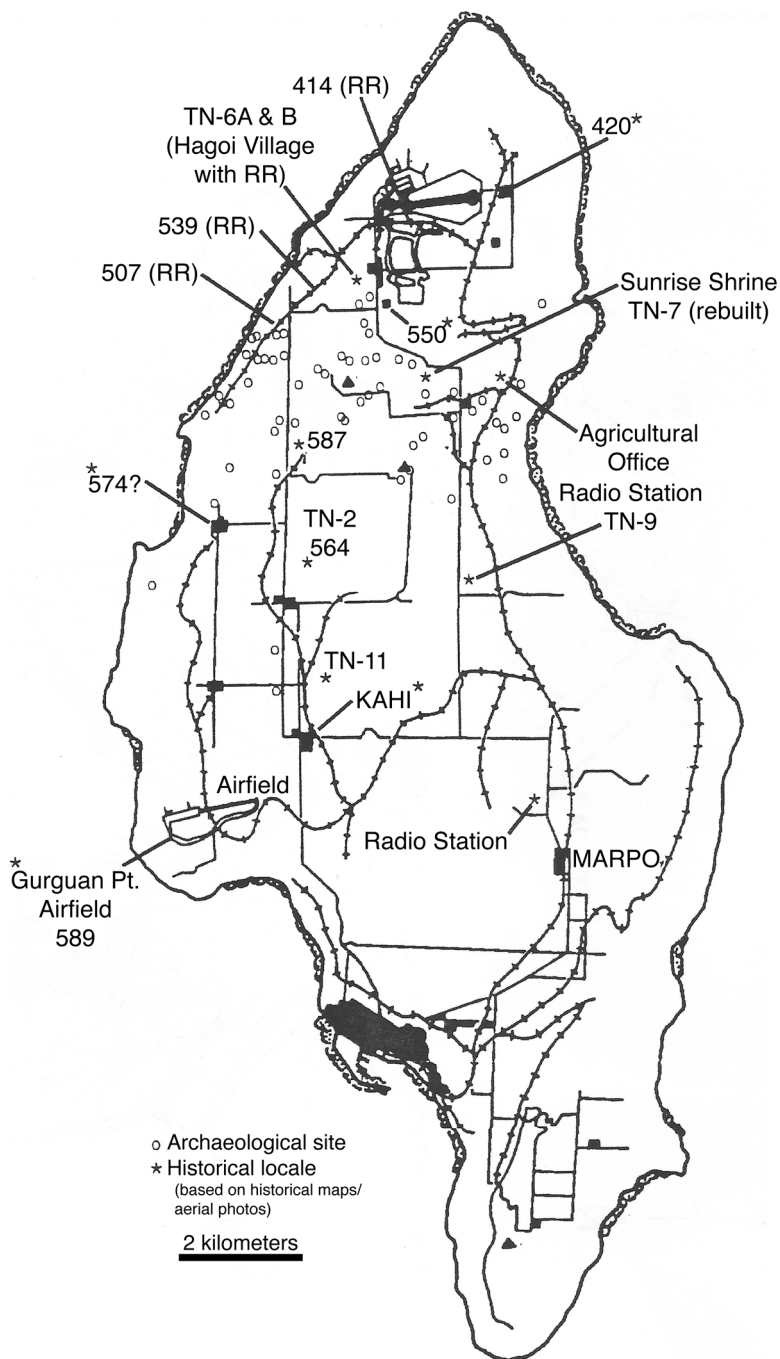


Fig. 4. Tinian 1938 settlement pattern and archaeological sites. Source: after Peattie 1988:65.

a model derived from the traditional Okinawan homestead (Welch and Bodner in press). Since most traditional homesteads in Okinawa were either destroyed during the U.S. invasion and ensuing battle from April to June 1945, or have been remodeled since the war, one has to rely on ethnohistoric literature and modern reconstructions for comparison. No attempt will be made here to compare the vast corpus of industrial (railroads, sugarcane mills, laboratories, ports), military (bunkers, defensive guns, barracks, runways), and urban (administration, shops, post offices, housing, entertainment) architecture left in ruins on both Tinian and Okinawa, although parallels are likely to exist in these cases as well.

After the last Sho Dynasty king abdicated to the Meiji government, many families of noble status were forced to migrate to the countryside from the towns and cities where they had formerly resided. Meanwhile, severe tributary taxes exacted on the countryside after Okinawa became a prefecture of Japan in 1879 pushed the landless peasant farming families, who had lived within less substantial, single room dwellings (more often thatched than tiled) in rural areas, to move to the port city of Naha seeking wage-based employment. These peasant laborers were willing to migrate abroad when the opportunity presented itself, while former nobility who retained some economic means were more likely able to afford the cost of migrating to the Marianas plantations to become tenant farmers.

Tamayama Kensuke, a former Okinawan resident of Tinian who was apparently able to afford this arduous transition, described the labor that went into building new residences and clearing farmland in Tinian:

We flattened the residential area and built tin-roof housing (9 *tsubo* or 29.7 m²). We also built a water tank 50 *koku* (9,000 liters). We opened the primitive jungle with help of five laborers. After chopping down the forest, we gathered the trees for burning. After that, we stretched ropes every 50 *ken* (27 m) in length and 60 *ken* (108 m) horizontally and dug holes for planting cane. The distance between cane plants was five *shaku* (0.3 m) and the depth was six or seven *sun* (3.03 cm). I bought a cow at 250 yen at Nan'yō Kōhatsu's ranch and trained it to pull a cart and it carried nursery trees. After planting, we cut the grass. In November, the plants grew into ears and came into full bloom with golden flowers. (quoted in Higuchi 2008:57)

Higuchi explains that individual laborers and some of their families were housed at the NKK barracks opposite the sugar refinery in Tinian Town:

Construction of company housing structures fell to the Building and Repair Section of the NKK carpentry shop, which contracted construction and civil engineering firms from Japan and Tinian itself. . . . Foundations of the barracks consisted of a series [of] concrete bases set upon Kachiwariishi (pressed coral). Other construction materials included wooden parts made from Beimatsu (Douglas fir, Oregon pine, *Pseudotsuga taxifolia*) and from Hokkaimatsu (silver fir, Yeddo [Japanese] spruce, *Picea jezoensis*). (quoted in Higuchi 1998:170)

These descriptions may be compared with a reconstructed traditional Okinawan homestead of the pre–World War II period that was recreated for foreign visitors and local students to the Okinawa Churaumi Aquarium. The main house with tiled roof is a substantial wood-framed structure with a short stone wall blocking the view to the entrance (Fig. 5). Given the rather cold and bitter winters and the ravages of typhoon season in the Ryūkyū Islands, the home fires in the ground-floor mortared indoor kitchen stove may have been kept burning overnight; the outdoor kitchen was more suited for use in the daytime or throughout stifling summer weather (Fig. 6). Large



Fig. 5. Traditional Okinawan house. Photograph by author with permission of Okinawa Churaumi Aquarium.

stone containers (perhaps of considerable antiquity) situated near the well or roof runoff were likely storage containers for daily water use in the home and garden, as would have been wooden barrels, since it never gets quite cold enough to freeze in Okinawa. Also part of the traditional Okinawan homestead was a pigpen with tall rear stone walls in close proximity to the family privy (Fig. 7). There was also a household garden across which manure and kitchen refuse was spread when they weren't being used on the fields at a greater distance from the home (Fig. 8). Large or extended families might construct a granary for storing grain through the winter.

The traditional Okinawan homestead as presented in ethnohistoric literature is a relatively high-walled compound with a centrally located raised-floor family residence of three rooms attached to a ground-floor kitchen with hearth, surrounded in some cases by a well and pond, garden, granary, sink with water catchment, pigpen near toilet, manure trough, and chicken coop (Fig. 9). While the construction materials in traditional Okinawan homesteads bear little resemblance to what was available in the Tinian forest, one can see similarities in the ground plan of one pre-World War II domestic compound in Tinian (Fig. 10). For instance, the three concrete cisterns of Feature A in Figure 10 could easily substitute for the water containers in Okinawa, while their proximity to a collapsed two-holed oven would presumably indicate they were situated next to the outdoor kitchen (still a must in many Chamorro households today).

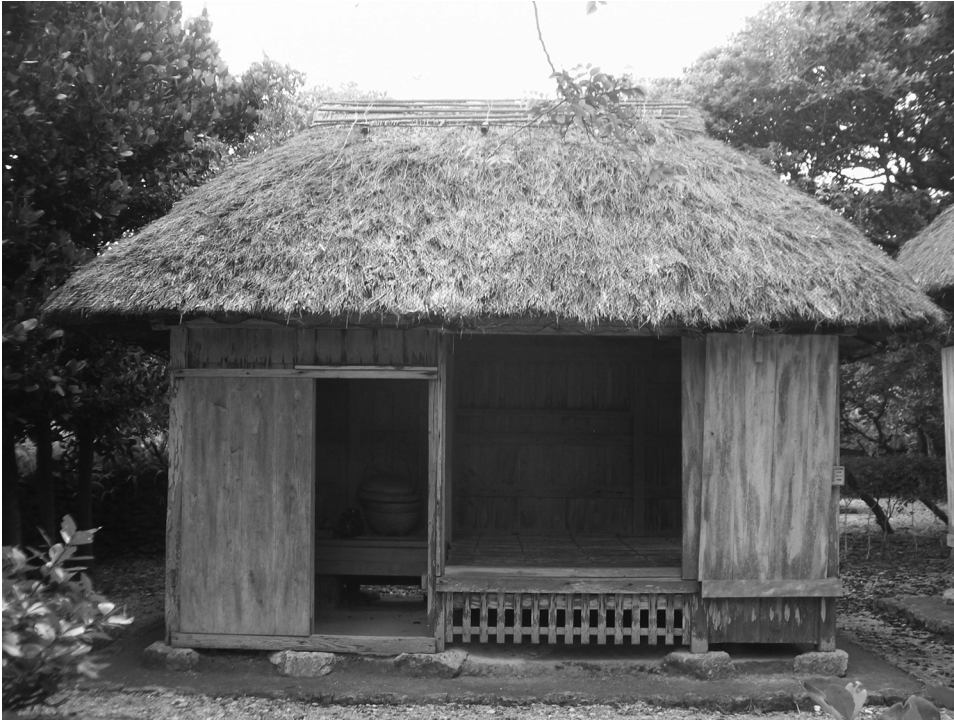


Fig. 6. Traditional outdoor kitchen. Photograph by author with permission of Okinawa Churaumi Aquarium.

The family residence on Tinian is likely to have been the partially walled and floored structure on the left in Feature C of Figure 10, surrounded by surface ceramic refuse and concrete rubble. The more substantial concrete walled structure with multiple levels of flooring in Feature B has been interpreted by Higuchi (2008) and Tuggle (2008) as a pigsty with outside chambers to remove waste materials after soaking in water. Two smaller outhouses for human residents nearby complete the complex, which would have served to generate fertilizer for use in nearby household gardens and the sugarcane fields from which many residents garnered their rent. Domestic refuse such as fragmented porcelain rice bowls may have later been introduced into the manure pile, as it would have been for many centuries previously in Okinawa.

Farming Methods

During a survey of agricultural fields on the small island of Ie Shima off the west coast of Okinawa by this author and ARCGEO, several areas were noted to contain small fragments of sixteenth-century Celadon ceramics presumed to originate in China, plus ceramics of Japanese and Okinawan manufacture from later centuries.⁴ Although excavation of these sites was not conducted, the small sherd size was assumed to reflect both repeated plowing and their derivation from secondary deposition elsewhere. A mechanism for explaining the presence of Ryūkyū Kingdom and imported ceramics



Fig. 7. Traditional toilet and pigpen. Photograph by author with permission of Okinawa Churaumi Aquarium.

within modern fields was immediately apparent, as they are still being fertilized today with the use of local cattle manure, sometimes mixed with crushed limestone deemed beneficial for growing tobacco and certain other plants (Fig. 11).

In order to increase yields over time, historic Okinawan farmers used domestic household refuse mixed with human and barnyard animal wastes to fertilize their gardens and fields, with only short periods of fallow. It is assumed this land use practice first developed in response to increasing tribute obligations inherent in expanding fifteenth-century regional polities in areas such as Ie Shima that were not suitable for ponded rice production. This practice was formalized with increased terraforming of the hillsides during the sixteenth-century unification of the Ryūkyū Kingdom. European visitors who arrived in the early nineteenth century described a similar setting. During the second visit of the British warship H.M.S. *Lyra* to the “Great Loo-Choo Island” (Okinawa), Captain Basil Hall (1818:104) observed that “the side of the hill is cut into horizontal irregular terraces, which are cultivated with apparent care, and irrigated by means of ditches.”

Although British officers and French clergy were perhaps unaware of the political status of their less than gracious hosts in the early nineteenth century (Bollinger 1991), their observations make it clear that “domestic agriculture assumed paramount importance in Okinawa after 1610. Every village was hard pressed to produce enough food and textiles to meet the tax levy” (Kerr 1958:169). By that time, sweet potatoes had become a mainstay of the local diet (they had been introduced from China in



Fig. 8. Traditional household garden. Photograph by author with permission of Okinawa Churaumi Aquarium.

1605). When Admiral Perry's fleet first passed Okinawa in 1853, naturalist James Morrow noted that "nearly the whole surface seems to be in the highest state of cultivation . . . and the whole country [appears] to be overspread by a series of gardens rather than farms" (McCune 1975:9).

Such hyper-productivity of the agricultural landscape was already a burden on local farmers in the early seventeenth century after the Satsuma invasion (Turnbull 2009). This burden was only exacerbated when sugar from Okinawan cane became a primary commodity much in demand during Meiji-era Japan. Sugarcane was first introduced to Okinawa in 1374, but increased in importance when improved methods of extraction were developed for taxation in 1623. After annexation in 1879, the Japanese built modern sugar mills and introduced more productive types of sugarcane.

Traditional farming practices may even have been heightened during the deprivations of the late war years, since early post-War World II observations of rural agriculture in southern Okinawa in the early 1950s noted that "farmers make efficient use of water from small streams or from artificial ditches which carry the runoff to places where it can be used" (Glacken 1955:133). Furthermore, "a farmer may shovel up the soil which has accumulated in a bend of one of these ditches and restore soil to his land," then add compost of "dried miscanthus or any kind of grass, ashes and cinders, some pieces of charcoal, and goat droppings" (Glacken 1955:127, 134).

Tamayama Kensuke, who was apparently a farmer in Okinawa before moving to the Mariana Islands, observed:

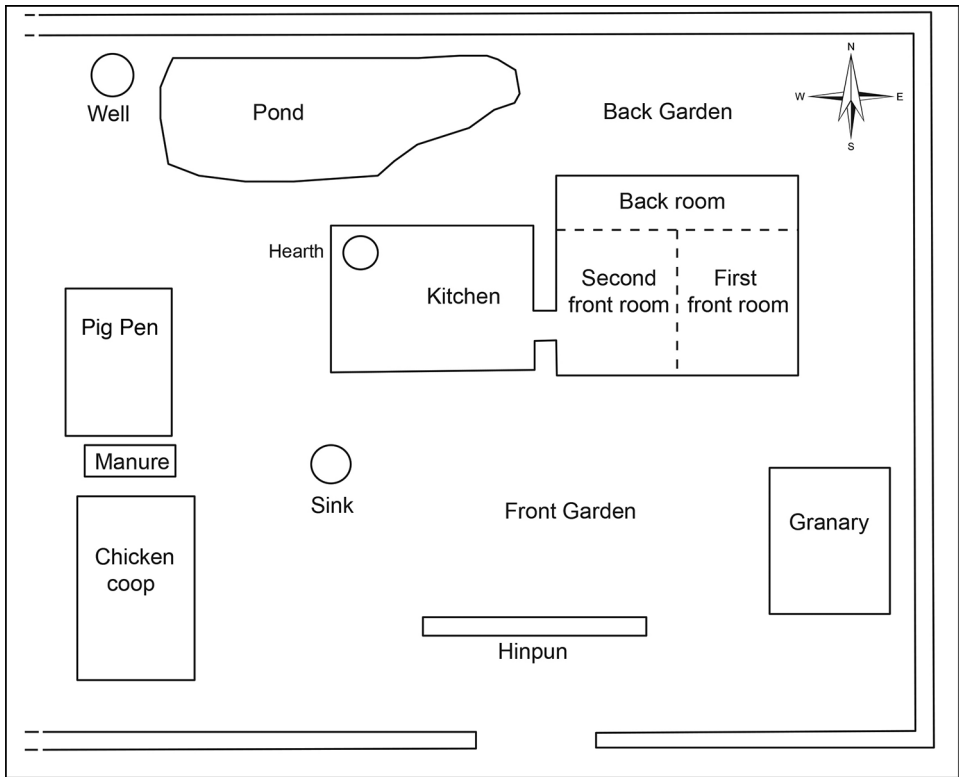


Fig. 9. Traditional Okinawan homestead. Source: after Shiroma 2012:28.

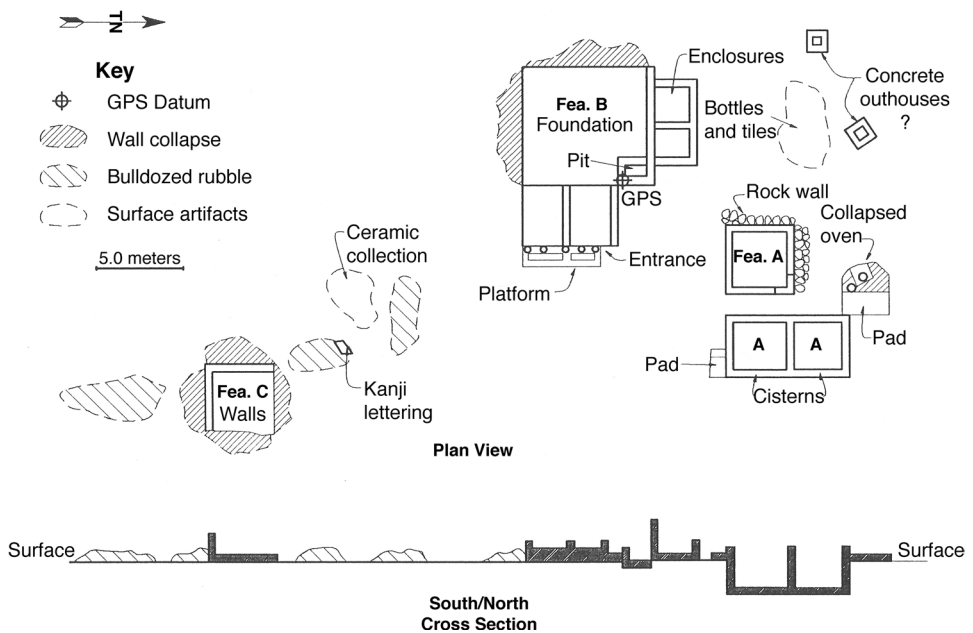


Fig. 10. Pre-World War II homestead in Tinian. Source: after Dixon 2004:288.



Fig. 11. Mixing of manure and limestone in fields on Ie Shima. Photograph by author.

The difference in life between the homeland [Okinawa] and Tinian was that all families had no anxiety regarding life in the islands. Women went to the Nan'yō Kōhatsu's *shuho* (canteen) at the end of each month by a bull cart and with a passbook. We could shop [for] vermicelli, miso, *shōyu* [soy sauce], *iriko* [anchovy], sugar, canned beef, and canned sardine, up to 25 yen. There was one *chō* of fallow field.⁵ We planted potatoes, taro, peanuts, gourds, and vegetables. There were banana and papaya trees around the house. (quoted in Higuchi 2008:57)

Higuchi further describes the variety of cultivars on Tinian:

Just before the sugar production period (early January to June every year), the farmers had a very busy harvest time every December. They paid 20 percent of the total income from sugarcane to the company. The farmers also earned income from hog raising and grew vegetables for self-consumption. They planted peanuts, cotton, pineapples, papaya, and castor-oil plants in fallow farms and unsuitable lands. There was no water system for the farmers except rainwater. (2008:51)

Fertilizer came from human and animal waste collected from a variety of areas. For example, in the NKK barracks across from the sugar refinery:

One toilet was composed of two doors on each side (for women) and a central stall without a door (for men). Human solid waste was hand ladled into wooden pails by a worker of the NKK General Section. This waste was then transported by a *karator* [traditional bull cart] equipped with a wooden frame, to the ocean. Some was distributed as fertilizer. . . . Organic garbage was buried underground. Bottles and other glass containers were prized as recyclable. They were taken to the store and re-filled with oil, soy sauce, or kerosene. (Higuchi 1998:173)

Rather than exemplifying careless housekeeping, it is tempting to interpret the domestic refuse found around pre–World War II Tinian homesteads as evidence that household gardens were being fertilized with manure mixed with broken household items. Fragmented Japanese ceramics and glass found in more distant contexts similarly imply that traditional fertilization techniques were used in order to keep up with increasing sugarcane and vegetable production demands on the rural populace after the arrival of military reinforcements in early 1944. Recent interpretation of several large concrete ponding basins on Tinian indicate they likely served as industrial-scale manure-processing facilities situated near pig farms (Tuggle 2008); they were presumably used not by small farmers but to produce fertilizer for NKK agricultural fields.

Animal Husbandry

Okinawan farmers were familiar with a variety of domesticated animals before they migrated to Tinian. For example, Tamayama Kensuke appears to have had some experience with animal husbandry before leaving Okinawa, since he stated that “Each family had two cows, two pigs, five goats, and 20–30 chicken[s] on average” (quoted in Higuchi 2008:59). Pigs, dogs, and chickens were not brought to the Mariana Islands during prehistoric times (Russell 1998), but domesticated pigs may have been imported to Okinawa from China or Japan in the Early Shellmound period before the advent of agriculture (Pearson 2013). Wild boar were hunted in the upland Jomon communities of Japan before the rise of the Yamato state (Habu 2004). They appear to have played a decreasing role in subsistence once ponded rice fields encroached on their habitat and they became a nuisance to grain storage. Rice agriculture was not adopted in Okinawa until much later and never impinged on inland habitat to the extent found in mainland Japan.

In contrast, the raising of domestic pigs (perhaps modeled on observations in China) can be traced to the Kingdom period in the Ryūkyūs, when each household had to raise goats and pigs for taxation to Shuri (Kerr 1958). Pigs were fed in part on human excrement. Most large livestock did not survive World War II or the deprivations of the postwar years, but pigs became a major source of cash for recovering families, with pork consumed during the holiday season and at family events. Pigs were kept in special pens, often made of stone:

If a family can afford it, the pig is housed in a stone pen with stone floors. To protect this living bank account, considerable sums are invested in fine stone, or cement floors and an adequate roof. The pen may be in the same building with the outside toilet, but with dividing partitions. (Glacken 1955:157)

Similar pigpens were built near the NKK barracks on Tinian:

Some families who fed pigs built a private water catchment made of concrete in front of their barracks. Another family built a rectangular concrete basin in the ground for water storage and had a small stove for preparing pig’s food. This arrangement was covered by a small tin roof. (Higuchi 1998:174)

On prewar Tinian this same pairing of pigpen and outside privy has been observed in numerous archaeological farmsteads (O’Day and Vernon in press), often constructed with concrete floor and walls with small apertures to allow manure to flow into an adjacent pit for easy extraction. Besides being used to fertilize the family garden,

manure mixed with household refuse could be carried to nearby agricultural fields to increase the yield of the sugarcane.

Water Conservation

The conservation of water on a flat limestone island that has no freshwater streams was undoubtedly a concern for native Chamorro inhabitants during the Pre-Latte and Latte periods of occupation. Fresh water was likely obtained through the collection of low-tide aquifer runoff on exposed reef rocks or in caves or shallow wells dug on beaches. Household contrivances were also used to catch and hold seasonal rain overflow. The adoption of large earthenware Japanese jars or *tinaja* for domestic water storage on the island of Rota during the plantation era predating World War II may even have begun as early as the recovery of similarly sized storage vessels from wrecked Spanish galleons (Stephenson and Moore 1980).

A historic account describes a water-catchment innovation on Ie Shima. Artificial water entrapment reservoirs were constructed within shallow natural depressions using a combination of clay and sand, compacted by the repeated action of horses trampling the surface, to hold rain runoff for household and farming needs in Ie Shima (Naoki Higa, pers. comm. 2012). That this technique may date much earlier than the introduction of horses is suggested by the excavated presence of fragmented Late Jomon or Shellmound pottery found in redeposited contexts intruding into a mottled clay horizon within a natural depression that still fills with rainfall and attracts amphibians and seasonal waterfowl today. Although Ie Shima and Tinian are geologically quite similar, this type of water reservoir does not appear on Tinian.

As mentioned earlier, domestic Okinawan household structures included large stone containers situated near a well or roof to catch runoff; these storage containers likely held water for daily use in the home and garden. Wooden barrels placed near the roofline would also have held water for daily use. During the plantation era on Tinian, rectangular concrete cisterns appear to have been the functional equivalent of traditional Okinawan water catchment methods. According to Asato Uto, a former Okinawan resident confronted with the challenge of procuring fresh water after migrating, "On Tinian, we could not dig a well and there was no spring. Each family hired a contractor to build a concrete water tank (4 × 4 m). Some of the materials came from limestone which was common" (quoted in Higuchi 2008:59). Tinian cisterns had covered lids, circular holes in the corner for drainpipe inflow, and small doors enabling people to enter and clean them (Fig. 12). Similar cisterns were built in the NKK barracks:

Rain water from the front entrance side and back kitchen side roof was collected into one tin eaves which was extended to a small hole in the top of the cistern. The eaves passed overhead and did not disturb residents' passage. All informants said one cistern was used for every sixteen families. However, on the [NKK] project site, two cisterns were found per six quadplex barracks. It was not clear how many families used one cistern. Water was plentiful during the rainy season. When it was dry season, covers on the cisterns were always locked and someone on shift allowed access to the cistern for a limited time each day. Because some accidents happened, a cover was put on each cistern to prevent small children from falling into the cistern during play. (Higuchi 1998:174)

While wetland settings on Tinian may have been used by Latte period inhabitants for taro cultivation, those situated near NKK fields in the early twentieth century



Fig. 12. Pre-World War II Water Cistern in Tinian. Source photograph: Dixon 2004:289.

would presumably have been targeted for sugarcane production. Permanent fresh-water sources on the island were noted at Lake Hagoi and the Makpo area; these were mostly used for cattle ranching before WWII (Farrell 2012). It might be informative to explore moist settings located near former Okinawan farmsteads on Tinian for evidence of deliberate subsurface modification or fragments of water jars, which were perhaps used during serious droughts and after typhoon damage to roof catchments, especially during the early years of the plantation era on Tinian.

Mortuary Customs

Another aspect of Okinawan tradition being transported to Tinian are mortuary customs. Such customs are rarely addressed in the archeological literature or oral testimony of former Okinawa residents on Tinian. Indeed, no evidence of NKK plantation-era cemeteries has been recorded on the island (except at the post-U.S. invasion refugee camp, Camp Chulu). A large brick oven complex situated behind San Jose village appears to have been the crematorium for all residents. Cremation was mandated by the Meiji reformation in Japan and its colonies and protectorates. It is assumed that ashes of the deceased farmers in Tinian were transferred back to their families in Okinawa during the plantation era, although what arrangements were made during the last years of World War II is unknown.

Since well before 1879 in Okinawa, family tombs have been situated in auspicious locations and were used over many generations. Some early tombs were *horinukibaka*: limestone caves and rock shelters modified with walled entrances. Others were modeled on Fujian styles observed in China, including the *kamekobaca* or “turtleback” mausoleum (MacNeil and Welch 2003). The traditional mortuary custom in Okinawa allowed the recently deceased to decompose in a natural setting for a number of

years, where they were regularly visited by family members, before being cleaned and reinterred for tomb burial in special ceramic vessels. This custom is of considerable antiquity and was noted in the cliff lines of the southern Ryūkyūs by shipwrecked Koreans in 1477 (Rokkum 2006).

On Ie Shima, a recent archaeological survey recorded many low-walled rock shelters nestled within the overgrown limestone cliff lines; these mortuary preparation sites are called *shiruhiradashi*. They are rarely entered today because they are the habitat of the venomous Habu snake. Also, locals stay away from them out of respect for the spirits of their ancestors. Some of these sites were used as civilian refuges or military defense sites during the U.S. invasion in 1945. Most contained very little material evidence of their prior use and, notably, most had no indication of prehistoric use. Some formal tombs were also temporarily used by American soldiers during combat, or destroyed with the assumption that they harbored Japanese defenders.

As noted earlier, mortuary practices during the Japanese administration of Tinian usually involved cremation:

Moriyama (1998 letter to Higuchi) indicated that the Honganji (Hongan Temple) missionary office was built on Tinian in 1930. Thereafter, when someone died, a funeral ceremony was held at the temple and the body was cremated at the crematory (located near the present Korean memorial). The ashes were stored temporarily in the natural cave near the crematory. When NKK officials traveled to Japan, sometimes they carried the cremains back to Japan where they were given to relatives who would place them in their family burial places. At other times, cremains were buried on Tinian at the cemetery located near the Hongan Temple. (Higuchi 1998:10)

Nakajima Fumihiko, a former Okinawan resident of Tinian, stated that after the end of the war, after Japanese citizens were relocated to Camp Chulu by American occupation forces, “We gathered 2,000 civilians’ ashes in the Carolinas and Sabanetas areas for one month in late August 1945. We buried them in a joint graveyard (a half *chō* or 1.225 acres [4959.4 m²]) in north hill of the Chulu camp” (Higuchi 2008:62).

On Tinian, numerous rock shelters modified with cobble walls have been routinely recorded as either civilian refuge sites hastily erected before the 1944 U.S. invasion or expedient defenses erected by Japanese soldiers in expectation of protracted battle (Dixon and Schaefer 2014). While either interpretation would stand to reason on Tinian, ethnohistoric studies on Okinawa conducted in the early 1960s suggest that traditional Okinawan mortuary practices, including building *shiruhiradashi* rock shelters, continued into the Showa era before the war’s end (Kaneko 1964). Poor rural residents used *shiruhiradashi* to avoid the costs of cremation mandated by Japanese and later American law. The question could then be asked, were members of some Okinawan families left for traditional decomposition in these settings, perhaps small children or elder members never registered as NKK laborers? Judging from the sites recorded in Ie Shima, the question cannot be answered by archaeological inquiry alone.

Ritual Locations

The final topic of comparison between Okinawa and Tinian is admittedly a stretch, but begs discussion because of the modern and historical importance of *utaki*, traditional shrines in rural settings. Such shrines were used by the Noro priesthood in Okinawa to commune with *kami*, the spirits of ancestors and natural formations (Sered 1999).⁶ Shrines were often set in sacred groves of the large, old trees found

growing within limestone outcroppings. Tradition says that certain *kami* were present at these locations at auspicious times of the year.⁷

A few *utaki* contain small structures, but the majority do not. Today, a small number of appropriate participants continue to hold rituals at these locations before moving to a community center to participate in larger, related, public events (Rokkum 2006). These settings are otherwise avoided, according to observations of daily behavior and the oral testimony of prewar residents on Tinian who have since returned to Okinawa.

No evidence of the transfer of Noro traditions from Okinawa is recorded on Tinian, nor would NKK have endorsed it. NKK constructed six Shinto shrines on Tinian: one for each of four farm districts, one for Tinian Town, and one above Chulu Village. The four farming district shrines are Sumiyoshi Jinja (for the First Farm, Songsong), Izumi Jinja (Second Farm, Marpo), Tachibana Jinja (Third Farm, Kahi), and Hinode Jinja (Fourth Farm, Asiga). Tinian Jinja was the shrine for Tinian-machi (San Jose). The Lasso Jinja and Hongwanji temple branch office (serving 2000 congregants) were built in Chulu (Higuchi in Tuggle 2008:51). All these shrines predate World War II except for the Fourth Farm shrine (today located on Broadway and called the Asahi or NKK shrine), which has an inscription indicating it was constructed and opened on 10 December 1941. This is the same date of Guam's surrender to the Japanese following the 7 December (8 December in Guam) attack on Pearl Harbor. This implies the shrine was built to commemorate a successful military event. Ironically, the Shinto-American Memorial at the end of Broadway was built using concrete lanterns removed from the NKK shrine by the U.S. military to commemorate its successful campaign in 1944.

While regular public participation in government-sanctioned Shinto religious events was expected, some members of the Okinawan community may have transferred their reverence for natural settings and *kami* spirits to the new natural landscape of Tinian, while leaving behind public reverence for Noro priestesses and traditional Noro ritual. The most likely setting for such discreet reverence would have been the First Farm (today called Tinian) shrine, which was constructed within an elevated limestone outcrop and a native forest canopy constituted by large *Ficus* sp. or *numu* trees on the slopes of the Kasiyu plateau, well away from agricultural fields and housing.

This is the only shrine on Tinian where Shisa statuary are found (Fig. 13). Shisa is the traditional protector dog-lion modeled on the Chinese Fu dog that has become a widely recognized symbol of Okinawan identity. Shisa statues are found in many rural and urban homes and gateposts throughout Okinawa. Small offerings of incense are still occasionally left at the feet of the statues at this shrine on Tinian, perhaps by former Ryūkyūan residents visiting the island. More often, Japanese tourists leave low-denomination coins (50 yen or less) with circular or rectangular perforations at the fenced shrine above the statues. Starting well before the Gusuku period, similar style coins were imported to Okinawa from first millennium China (Pearson 2013); when encountered in archaeological contexts, most such coins are found in *gusuku* castles, many of which may have been former *utaki* shrines.

DISCUSSION

In order to discuss the hypothesized application of Okinawa as a transported landscape for interpreting pre-World War II archaeological remains of the Japanese plantation



Fig. 13. Shisas at Tinian shrine. Photograph courtesy of Andrea Jalandoni.

era on the island of Tinian, more detail concerning the rural farm sites must be provided. According to Higuchi:

There were two kinds of farm on Tinian: the tenant farm, that is a farmer and his family and the farms directly operated by Nan'yō Kōhatsu [NKK]. These decisions were probably made as a result of an order from the Japanese Navy. Because these areas were strategically important the navy needed to reserve the lands under the supervision of Nan'yō Kōhatsu, as was the case with other examples in the Mariana Islands. In the farm areas, 53 percent of sugarcane farmers (tenant farmers and semi-tenant farmers) and 74 percent of farm laborers (self-sugarcane farmers and laborers on farms) were Okinawans. Nan'yō Kōhatsu's business largely depended on these numerous skillful and cheap immigrant laborers from Okinawa. Needless to say, Okinawan attention was not totally given to agriculture, they also had businesses such as restaurants, theater, and entertainment, during Japanese times. (Higuchi 2008: 46)

In 1939, a total of 15,429 civilian inhabitants were on Tinian; 58 percent were Okinawan and 41 percent were mainland Japanese, with much smaller numbers of Koreans, Chinese, and one family of Chamorros (Tuggle in press). Approximately 10,000 people lived in the farming districts. A thousand of these were employed at NKK facilities in Tinian Town; the rest were presumably their dependents or residents of the town and three rural villages on the island (Marpo, Kahi, and Asiga). There were nine farm management districts on the island; four were tenant farm districts (with 965 lots) and five were NKK direct management districts (with 462 lots); company housing was provided in the latter. Farms in the northern, central, and north-western areas were designated direct management farms for military reasons.⁸ Of the tenant farm lots, 800 were occupied and 165 were vacant, mostly situated on land

unsuitable for cultivation near limestone bedrock cliffs and shorelines. Each family received a 6 *chō* (14.7 acres or 59,489 m²) lot.

Approximately 250 farmsteads have since been recorded archaeologically, so many more remain undiscovered or were likely destroyed during the war or subsequent U.S. military construction and later agricultural clearing. An accurate count of exactly how many farm sites were occupied by Okinawans rather than mainland Japanese remains to be calculated, but the range of features recorded archaeologically may reflect economic status, length of occupation, size of family, and degree of post–World War II destruction as well as ethnicity. In a study of a small percentage of these farms in central Tinian (Dixon 2004), not all farms were found to contain concrete privies or outdoor ovens and some did not contain concrete baths or water cisterns, while others had several (Table 1). Structures built of more perishable materials likely also existed in the past.

It is unclear to what degree Okinawan or other Japanese tenant farmers were allowed to design and construct their own housing after being assigned a house lot. Many may not have arrived on Tinian with the economic means to build their own houses. Certainly family housing and sanitation specifications would have been determined to some degree by NKK, given the company's compliance with Showa-era

TABLE 1. FARM SITES RECORDED IN THE CENTRAL TENANT FARM DISTRICT (AFTER DIXON 2004)

SITE (TN #)	SLAB/ PAD		PERISHABLE	ANCILLARY	CISTERN	CISTERN	CISTERN	CISTERN	OVEN	BATH	PRIVY
					1	2	3	4			
106		X			X						X
152		X		X	X						
154	X				X					X	
158	X										
178		X									
181		X			X						
198	X	X		X	X						X
203	X	X	X	X	X						X
236	X		X	X	X				X		
306	X				X						
307		X		X	X						
309	X				X						
310	X			X	X					X	
311						X					
315		X	X								
317					X						
319	X	X		X		X					
320	X	X				X					
322	X		X			X					
325	X	X		X	X				X		
337	X				X						X
587	X			X				X	X		
648			X		X						
671	X		X	X				X		X	X
682	X		X				X			X	X
683						X	X		X		X
685		X		X							

“X” denotes presence; blank space denotes absence.

codes and regulations enforced by mainland Japanese employers. Both Welch and Bodner's (in press) hypothesized design of Tinian farmsteads and the ideal design of traditional rural homes in Okinawa (Shiroma 2012) have much in common with nineteenth century homes in rural mainland Japan. The vernacular architecture of both islands and the Japanese archipelago included small rooms raised on low pilings. Furnishings were sparse compared with EuroAmerican dwellings of the times (Morse [1886] 1972: 116, fig. 98). Such small rural homesteads usually contained a two-holed wood-fueled stove that supported metal cooking vessels in the kitchen (ibid.: 187, fig. 168), an outdoor privy that could be cleaned from below (ibid.: fig. 217), water wells or cisterns (ibid.: fig. 298), and contrivances to bring water nearer the house for bathing and cooking (ibid.: fig. 301).

Although an overtly Japanese landscape was evident in early twentieth-century rural Tinian, this settlement pattern does not presuppose that a traditional ethnic Okinawan mind-set would have been absent amongst newly arrived immigrants or their children. Studies of Meiji-era Japanese *dekasegi* (migrant workers) working abroad (Adachi 2006; Stanlaw 2006) and later laborers recruited to U.S. territorial Hawai'i (Dresner 2007; Takaki 1989), Latin America, or Europe indicate that many immigrants retained their cultural identity for generations (Befu 2008). Acceptable parameters for household construction, farming practices, water conservation, animal husbandry, mortuary customs, and ritual site location were likely defined by NKK to ensure they did not impinge on crop yield quotas set by the company or undermine standards of public behavior. How these practices and locations were defined and used by Okinawans in private, however, remains elusive in the archaeological record.

Since not all preferred foods from Okinawa were available, foods chosen for family consumption would presumably have reflected their island of origin, the economic means of each farmer, and the seeds or rootstocks available at company stores in Tinian Town. The most important food was pork. Even today, Okinawan-style *soba* noodles are served in Okinawa with pork knuckles, considered by many locals and visitors as capturing the essence of traditional rural cuisine. This inexpensive, easy to prepare working-class meal may have been common in Okinawan restaurants, *izakaya* (informal eating and drinking establishments), and farm kitchens on prewar Tinian. Archaeologists and historians have recently identified the pigpen or -sty as the primary architectural feature most likely to reflect traditional Okinawan ethnicity in the archaeological remains of the plantation-era Tinian household (Connie Bodner, Wakako Higuchi, David Tuggle, and David Welch, pers. comm. 2014). These pens were situated next to the home, adjacent to the privy and garden. While the pigpen is not part of most modern households in the Ryūkyūs, the historical importance of the privy and its link to pigs is suggested by the fact that many families maintain a small shrine in their bathrooms to a *kami* (spirit) formerly associated with the use of excrement as pig fodder (Rokkum 2006; Sered 1999).

CONCLUSION

The objective of this study has been to assess the degree to which Okinawa can be envisioned as a transported landscape for interpreting the archaeological data of Tinian during the first decades of the twentieth century, when thousands of Okinawans migrated to the island to work as tenant farmers or contract laborers on sugarcane plantations operated by Nan'yō Kōhatsu Kaisha (NKK). Architectural remains

of many farmsteads from that era have been recorded by archaeologists on Tinian and archival documents have been researched by historians in Japan to reconstruct the record of development on the island. However, in the absence of a comparative framework such as that provided by Okinawan ethnohistory and ethnography, the material record may be insufficient to capture the subtleties of traditional Ryūkyū land use and cultural significance that may have existed on Tinian.

To return to the model of the transported landscape as used by archaeologists studying the precolonial era in the Pacific, it should be noted that besides artifacts and plants or animals provided by the NKK plantation to its employees, the Okinawans in Tinian probably “brought with them cognitive models of land use and management” (Kirch 2009: 416). Such traditional land management knowledge likely included appropriate forms of domestic architecture such as elevated homes suited to unpredictable tropical weather; organic farming methods such as manure fertilization; sustainable animal husbandry practices such as adjoining pigsties and human privies; and seasonal modes of water conservation such as roof catchment and wetland modification. Although not fully contextualized using ethnohistoric and ethnographic literature of Okinawa, evidence of these practices has been recorded by archaeologists of the early twentieth-century plantation on Tinian.

Spiritual beliefs and practices developed in the Ryūkyū landscape over many centuries were likely transported to Tinian by Okinawan farmers and laborers. These probably included mortuary customs such as use of *shiruhiradashi* (which were discouraged by the Japanese government during the Meiji and Showa eras) and selection of spiritually sanctified locations for building *utaki* and conducting certain community rituals (although these were discouraged by the state-sponsored Shinto religion). Post-World War II Okinawan ethnohistory and ethnography suggest such traditional expressions of spiritual beliefs survived the war at home in the Ryūkyūs, but have been modified by modern inhabitants of Okinawa to fit their contemporary socioeconomic and political world. If such practices were indeed present in the sugarcane plantation on Tinian, they may well have been similar to the practices that Okinawans today maintain to show respect to tradition and *kami*. In Tinian, these practices may have been disguised as family traditions, so they fall outside the normal scope of archaeological inquiry.

The concept of a transported landscape has been used to interpret the remains of Tinian’s much earlier Polynesian counterparts in Remote Oceania. Based on this study, it appears the heuristic device of Okinawan culture as a transported landscape can also aid interpretation of archaeological data of Tinian during the first decades of the twentieth century. The degree to which an Okinawan landscape was transported to the sugarcane plantations of nearby Saipan or Rota remains to be studied. On those islands, the process of integrating Okinawan and Japanese cultures to the preexisting patterns of the Chamorro and Carolinian residents was undoubtedly more complex.

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NOTES

1. They were no longer permitted to leave Tinian after 1944. Many of those who managed to return home to Okinawa before the end of World War II met an even more horrible fate than those who remained in Tinian.
2. Technical literature only accessible from the CNMI Historic Preservation Office in Saipan and the Okinawa Prefecture Museum in Naha, Japan, is not included in these brief histories.
3. Gusuku translates literally to "castle."
4. ARCGEO is a Japanese archaeological and geological consulting firm.
5. One *chō* equals 2,451 acres or 9918.8 m².
6. The traditional Okinawan Noro priesthood is female. The Noro religion is not associated with the Japanese state Shinto religion and its male priesthood.
7. In oral testimony from the island of Pagan, former Okinawan resident Moromi Kosei noted a reverence for the association of particularly old trees and large boulders that may have predated his arrival to the Japanese plantation: "I heard that coconut trees in the south of Pagan were the natural trees and trees in the north were planted during the German period. When I saw a coconut tree I could tell whether it was planted during the German period because of the footing of the tree. It was said there were human bones under the ground if there was a large lava boulder near such coconut tree" (quoted in Higuchi 2009:78).
8. "These decisions were probably made as a result of an order from the Japanese Navy. Because these areas were strategically important the navy needed to reserve the lands under the supervision of Nan'yō Kōhatsu, as was the case with other examples in the Mariana Islands" (Higuchi 2008:51).

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ABSTRACT

The two islands of Okinawa and Tinian in the western Pacific are often linked in the modern archaeological literature by a common ethnic heritage in the early twentieth century, with Okinawan culture serving as a template for interpreting the archaeological remains of the Japanese sugarcane plantation era in Tinian. Tens of thousands of Okinawans immigrated to Tinian and other Commonwealth of the Northern Mariana Islands to be tenant farmers or contract laborers on the plantations between the 1920s and 1944, when they could no longer leave. Structural and functional parallels do indeed exist between the architectural remains of many farmsteads of the plantation era on both islands. The extent to which these archaeological remains on Tinian reflect a “transported landscape” from Okinawa versus a Japanese colonial construct is explored, using the vehicle of Okinawan ethnohistory and ethnography. KEYWORDS: transported landscape, Okinawa, Tinian, archaeology, historical archaeology, western Pacific.